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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/735,114	12/12/2003	ChiaHua Ho	MXICP024	1904

25920 7590 09/26/2005

MARTINE PENILLA & GENCARELLA, LLP  
710 LAKEWAY DRIVE  
SUITE 200  
SUNNYVALE, CA 94085

EXAMINER

LE, THONG QUOC

ART UNIT	PAPER NUMBER
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2827

DATE MAILED: 09/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/735,114

Applicant(s)

HO ET AL.

Examiner

Thong Q. Le

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

### **DETAILED ACTION**

1. Amendment filed on 07/18/2005 has been entered.
2. Claims 1-20 are presented for examination.

### ***Response to Arguments***

3. Applicant's arguments with respect to claims 1-20 have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

5. Claims 1-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Nickel et al. (U.S. Patent No. 6,927,995).

Regarding claim 1, Nickel et al. disclose a magnetic random access memory (MRAM) cell (Figure 2), comprising:

a word line (Figure 2, 30);

a bit line perpendicular to the word line (Figure 2, 28);

a magnetic device (Figure 2, 10) disposed at an intersection of the word line and the bit line; and

a pair of writing magnets (Figure 2, 24, 18), each writing magnet disposed at an end of the magnetic device (Figure 2), wherein the pair of writing magnets switches a magnetic alignment of the magnetic device during a write operation (Column 2, lines 35-36, Column 3, lines 59-67). More specifically, Nickel et al. disclose wherein a current in the word line and the bit line generates a magnetic field on the pair of writing magnets during the write operation (Column 3, lines 59-67), and wherein the pair of writing magnets and the magnetic device are aligned along a long axis of the memory cell (Figure 1), and wherein the long axis of the memory cell is not aligned with the word line and the long axis is not aligned with the bit line (Figure 2), and wherein the magnetic device includes a magnetic tunnel junction (MTJ) (Column 1, lines 15-16), and wherein the magnetic device includes a giant magnetoresistance (GMR) material (Column 1, lines 15-17), and wherein the magnetic device includes a colossus magnetoresistance (CMR) material (Column 2, lines 30-40), and wherein the magnetic device includes an anisotropic magnetoresistance (AMR) material (Column 1, lines 50-60), and, writing magnet includes a soft ferromagnetic material (**Column 2, line 45**), and writing magnet includes a general ferromagnetic material (Column 2, lines 45, Column 4, lines 57-67).

6. Claims 1-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Hosotani (U.S. Patent No. 6,829,162).

Regarding claim 1, Hosotani discloses a magnetic random access memory (MRAM) cell (Figure 2), comprising:

a word line (Figure 3, 13);

a bit line perpendicular to the word line (Figure 3, 23);

a magnetic device (Figure 3, 16, 21) disposed at an intersection of the word line and the bit line; and

a pair of writing magnets (Figure 4, 102), each writing magnet disposed at an end of the magnetic device (Figure 4, 102, Column 4, lines 35-40), wherein the pair of writing magnets switches a magnetic alignment of the magnetic device during a write operation (Column 8, lines 54-67). More specifically, Hosotani disclose wherein a current in the word line and the bit line generates a magnetic field on the pair of writing magnets during the write operation (Column 8, lines 54-67), and wherein the pair of writing magnets and the magnetic device are aligned along a long axis of the memory cell (Figure 18), and wherein the long axis of the memory cell is not aligned with the word line and the long axis is not aligned with the bit line (Figure 18, 20), and wherein the magnetic device includes a magnetic tunnel junction (MTJ) (Column 1, lines 20-41), and wherein the magnetic device includes a giant magnetoresistance (GMR) material, and wherein the magnetic device includes a colossal magnetoresistance (CMR) material, and wherein the magnetic device includes an anisotropic magnetoresistance (AMR) material, and, writing magnet includes a soft ferromagnetic material, and writing magnet includes a general ferromagnetic material (Column 4, lines 9-67, Column 5 lines 1-67, Column 6, lines 1-30).

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thong Q. Le whose telephone number is 571-272-1783. The examiner can normally be reached on 8:00am-5:00pm M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoai V. Ho can be reached on 571-272-1777. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'Thong Q. Le', with a stylized flourish extending from the end.

Thong Q. Le  
Primary Examiner  
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